Australian Government

Department of the Environment and Energy

Assessment of the

Torres Strait Prawn Trawl Fishery

December 2017

CONTENTS

EXECUTIVE SUMMARY OF THE ASSESSMENT OF THE TORRES STRAIT PRAWN FISHERY

In September 2016 the Australian Fisheries Management Authority (AFMA) submitted an application on behalf of the Torres Strait Protected Zone Joint Authority (PZJA), for assessment of the Torres Strait Prawn Fishery under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as a wildlife trade operation (WTO).

The Department of the Environment and Energy assessed this application against the Australian Government 'Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition'. Public consutlation on the application was undertaken between 26 April to 31 May 2017. No comments were received.

The Torres Strait Prawn Fishery targets several prawn species and takes some other species as byproduct. The harvest is controlled through input and output controls and a harvest strategy specifies triggers for management action. The target species are not considered overfished or subject to overfishing and ecosystem impacts are of low concern while fishing effort is at relatively low levels.

There is some concern that increased effort in the fishery may impact on bycatch and benthic species, and increase the interactions with protected species. AFMA has advised that the fisheries management arrangements will be reviewed and revised if effort triggers stated in the Torres Strait Prawn Fishery Harvest Strategy (2011) are reached.

The Department recommends that the fishery be exempt from the export requirements of the EPBC Act and product derived from the fishery be included on the List of Exempt Native Specimens until 9 October 2026. Should fishing effort reach any of the trigger limits in the Torres Strait Prawn Fishery Harvest Strategy 2011, the Department will reassess the fishery.

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SECTION 1: ASSESSMENT SUMMARY OF THE TORRES STRAIT PRAWN FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION), CONSISTENT WITH THE EPBC ACT.

	Meets	Partially meets	Does not meet	Details
Guidelines				
Management regime	8 of 9	1 of 9	0 of 9	Robust management regime and consultation mechanisms are in place. While reporting on performance criteria is done, it is not routine or publicly accessible.
Principle 1 (target stocks)	6 of 11 & 2 N/A	3 of 11	0 of 11	Robust and active management of target stocks. Target stocks not overfished or subject to overfishing. Productivity is being estimated based on 2006 stock assessment and low effort in the fishery with the next stock assessment due to occur in 2018–19.
Principle 2 (bycatch and TEPS)	7 of 12 & 4 N/A	1 of 12	0 of 12	Bycatch is of low concern while effort is low. Measures are being implemented to mitigate potential impacts on protected species, specifically turtles and seasnakes.
Principle 2 (ecosystem impacts)	5 of 5	0 of 5	0 of 5	Ecosystem impacts are of low concern while effort is low. Should the fishery recover and increase effort in the future, it is likely some management action may be required to ensure sustainability of all bycatch and benthos.
EPBC requirements				
Part 12				There are no Marine Bioregional Plans relevant to the area of the Torres Strait.
Part 13	Meets			Impacts on EPBC Act-listed species are likely to be low while effort remains low.
Part 13A	Meets			The Torres Strait Prawn Fishery is consistent with the Objects of Part 13A. Inclusion on the List of Exempt Native Specimens is recommended for nine years, until 9 October 2026.
Part 16	Meets			The Fishery is managed in a precautionary manner.

Assessment history:
1st assessment finalised 2005 – WTO with 3 conditions and 13 recs.
2nd assessment finalised 2009 – WTO with 3 conditions and 7 recs.
3rd assessment finalised 2013 – WTO with 3 conditions, 2 recs.

Fishery reporting:

No annual reports have been provided to the Department.
PZJA Annual Report 2011–2014: http://pzja.gov.au/wp-content/uploads/2016/02/8125-AFMA-PZJA-Annual-Report-20112014_Accessible-updated.pdf
Fishery status reports 2016
http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/18_FishStatus2016TorresStraitPrawn_1.1.0.pdf
Fishery status reports 2017
http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr17d9abm_20170929/18_FishStatus2017TorresStraitPrawn_1.0.0.pdf

Key links:

Fishery information page on agency website – http://pzja.gov.au/the-fisheries/torres-strait-prawn-fishery/#.WYf-C_7QCUk
Management plan – Torres Strait Prawn Fishery Management Plan 2009 – https://www.legislation.gov.au/Details/F2009L00505
Torres Strait Prawn Fishery Management Plan Amendment 2017 – https://www.legislation.gov.au/Details/F2017L00120
Enforcing legislation:– *Torres Strait Fisheries Act 1984* – http://www.comlaw.gov.au/Details/C2014C00144; Torres Strait Fisheries Regulation 1985 – https://www.legislation.gov.au/Details/C2004H03604.
Harvest strategy or document that articulates control rules:– Harvest Strategy for the Torres Strait Prawn Fishery 2011 http://pzja.gov.au/the-fisheries/torres-strait-prawn-fishery/harvest-strategy-for-the-torres-strait-prawn-fishery/#.WbYh9P7QCUk
Bycatch and Discarding Workplan 2015-2017 http://pzja.gov.au/wp-content/uploads/2011/05/TSPF-Bycatch-and-Discard-Workplan_final.pdf
Ecological Risk Assessment (2007). http://pzja.gov.au/wp-content/uploads/2011/06/3.pdf
Environmental sustainability assessment update for habitats, assemblages and bycatch species in the Torres Strait Prawn Fishery. http://pzja.gov.au/wp-content/uploads/2013/07/Pitcher-Torres-Strait-trawl-sustainability-assessment-update-Final.pdf.
Publicly available stock assessment – O'Neill, MF and Turnbull, CT 2006, stock assessment of the Torres Strait tiger prawn fishery (*Penaeus esculentus*), Queensland, Department of Primary Industries and Fisheries, Brisbane.
https://www.daf.qld.gov.au/__data/assets/pdf_file/0010/62758/StockAssessment-TSTigerPrawn-2006-Part1.pdf

Enforcing legislation:

- *Torres Strait Fisheries Act 1984*
- Torres Strait Fisheries Regulations 1985
- *Torres Strait Treaty (Miscellaneous Amendments) Act 1984*
- Torres Strait Fisheries Management Instrument No. 13
- Fisheries Management Notice No. 47 – Torres Strait Fisheries (restriction on size of boats)
- Community Fishing Notice No. 1 (pdf copy on PZJA website but not found on legislation.gov.au)
- Torres Strait Fisheries Act 1984 - Proclamation (17/03/1999)

SECTION 2: DETAILED ANALYSIS OF TORRES STRAIT PRAWN FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

	Comment
THE MANAGEMENT REGIME	
The management regime does not have to be a formal statutory fishery management plan as such, and may include non-statutory management arrangements or management policies and programs. The regime should:	
Be documented, publicly available and transparent	**Meets** All relevant management documents including legislation, regulation, management plan, environmental impact statements, and fishery resources reports are publicly available on the agency's website. The Torres Strait Prawn Fishery is managed under the *Torres Strait Fisheries Act 1984*, the Torres Strait Fisheries Regulations 1985 and the Torres Strait Prawn Fishery Management Plan 2009.
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public	**Meets** The fishery management arrangements are prepared through consultation with the Torres Strait Prawn Management Advisory Committee (TSPMAC). There is opportunity for the general public to input into the process. Community consultation is available and includes opportunity to attend as an observer to the meetings. Significant legislation and management arrangement changes go through a public consultation process.
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process	**Meets** A range of expertise and public interest involved. The Protected Zone Joint Authority (PZJA) receives research advice from the Torres Strait Scientific Advisory Committee which includes members from research organisations, fisheries managers, Traditional Inhabitants and industry. Formal membership for registered native title body corporate (RNTBC) to sit on the TSPMAC. Results are made publicly available on the PZJA website.
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured	**Partially meets** Harvest strategy defines general objectives and performance criteria, not regularly used to assess effectiveness. The harvest strategy has a four year review period, providing effort in the Torres Strait Prawn Fishery does not reach any of the triggers. If triggers are reached prior to the four year review, the review process for the harvest strategy will be updated when it is amended at that point in time. Objectives, performance indicators, and performance measures are monitored and reassessed at this time. Performance measures are in the plan and reviewed under the TSPMAC – there is a recommendation to include a review of how the fishery is meeting the performance criteria. Reporting on performance criteria is undertaken irregularly and results are not publicly accessible.
Be capable of controlling the level of harvest in the fishery using input and/or output controls	**Meets** Controls have capacity to limit harvest. Input controls – Total Allowable Effort (TAE) on fishing nights (9,200 days for 2016, 2017, 2018 shared between Australia and PNG); individual transferable effort units; limited entry (maximum 61 licences); vessel length size restrictions, area and time closures.

Contain the means of enforcing critical aspects of the management arrangements	**Meets** The *Torres Strait Fisheries Act 1984* contains the means to enforce the management arrangements. Compliance includes Vessel Monitoring Systems (VMS) in real time and 2.6% coverage for the observer program.
Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria	**Meets** Performance reviews occur annually through the PZJA annual report and relevant accreditation processes. Stock status assessments of target species has not occurred since 2006 and rely on triggers being reached in Torres Strait Prawn Fishery Harvest Strategy 2011 before an updated stock assessment is required.
Be capable of assessing, monitoring and avoiding, remedying or mitigating any adverse impacts on the wider marine ecosystem in which the target species lives and the fishery operates	**Meets** The fishery is capable of effectively managing impacts on the marine environment through area and time closures, input controls on gear and vessels. A review of the ecological risk assessment will be considered when the harvest strategy trigger levels be reached. Ecological Risk Assessment - Level 1 SICA report – no higher risk assessment conducted. Sustainability report first conducted in 2005 and updated in 2011 (Pitcher, 2013). Updated report found low risk to substantially impact benthos and protected species Forecasted an updated stock assessment in 2018–19.
Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy	**Meets** The Commonwealth Harvest Strategy Policy and Commonwealth Fisheries Bycatch Policy does not automatically apply to Torres Strait fisheries. The Torres Strait Prawn Fishery Harvest Strategy and Bycatch and Discard Workplan 2015–2017 are guided by the Commonwealth Harvest Strategy Policy and Commonwealth Fisheries Bycatch Policy respectively.
PRINCIPLE 1 - A fishery must be conducted in a manner that does not lead to over-fishing, or for those stocks that are over-fished, the fishery must be conducted such that there is a high degree of probability the stock(s) will recover**.**	
Objective 1 - The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability.	
Information requirements	
1.1.1 There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring.	**Meets** Mandatory logbook reporting for the Torres Strait Prawn Fishery includes recording of catch and effort data, gear design (including (Turtle Excluder Devices (TEDs), Bycatch Reduction Devices (BRDs), and recording of Threatened Endangered and Protected species interactions. An observer program is in place and coverage set at 2.6% of actual effort. In 2016, three per cent of actual effort was covered by observers. Vessel Monitoring Systems (VMS) are also in place primarily to monitor effort and total number of days fished in the season. Fishery Independent Surveys were conducted by Fisheries Queensland through their Long Term Monitoring Program up until 2009.
Assessment	

1.1.2 There is a robust assessment of the dynamics and status of the species/fishery and periodic review of the process and the data collected. Assessment should include a process to identify any reduction in biological diversity and/or reproductive capacity. Review should take place at regular intervals but at least every three years.	**Partially meets** Most recent stock assessment was undertaken in 2004 and reviewed in 2006 (O'Neill and Turnbull 2006). Stock status is based on assessment of the catch and effort of the brown tiger prawn. No more recent estimate of biomass for the brown tiger prawn stock is available. The fishery uses as a proxy the low effort and high catch rates as an indication of sustainability of the target species. Tiger prawns are considered the species most vulnerable to overfishing in the Torres Strait Prawn Fishery (AFMA 2011). PZJA use Harvest Strategy triggers as a basis for when the stock assessment will be updated (75% of Australian portion of effort and catch – 4000 days and 680 tonnes of tiger prawns each year for two consecutive years). Most recent stock assessment for blue endeavour prawn was completed in 2009 (ABARES 2016). Neither species is considered overfished or subject to overfishing. Next stock assessment anticipated 2018–19 (brown tiger prawn).
1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.	**Partially meets** There is evidence of genetic separation of brown tiger prawns from east and west coasts of Australia (Ward et al. 2006). Little is known about the biological stock structure of the populations of blue endeavour prawns in fisheries where they are caught. However, based on a study of their migration patterns within the Torres Strait (Watson and Turnbull, 1993), blue endeavour prawns (and also brown tiger prawns) are assumed to be discrete from populations outside the Torres Strait (WA, NT and Qld) for stock assessment and management purposes.
1.1.4 There are reliable estimates of all removals, including commercial (landings and discards), recreational and indigenous, from the fished stock. These estimates have been factored into stock assessments and target species catch levels.	**Meets** Estimates of commercial catches are reported using approved daily fishing logbooks. There is no illegal, recreational or traditional catch. The prawn stocks within this fishery are straddling stocks between PNG and Australian waters. PNG operators do not currently actively fish in either PNG or Australian waters. Tiger prawns, endeavour prawns and king prawns are also caught in the Northern Prawn Fishery. Tagging studies indicate these are different stocks and home range of these species is thought to be small and mixing unlikely.
1.1.5 There is a sound estimate of the potential productivity of the fished stock(s) and the proportion that could be harvested.	**Partially meets** Productivity is being estimated based on 2006 stock assessment and low effort in the fishery. Next stock assessment anticipated 2018–19 (brown tiger prawn).
Management responses	
1.1.6 There are reference points (target and/or limit), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken.	**Meets** Effort and target reference points are prescribed in the Harvest Strategy for the Torres Strait Prawn Fishery 2011.
1.1.7 There are management strategies in place capable of controlling the level of take.	**Meets** Input controls including limited entry (max 61 boats), individual transferable effort units, TAE on fishing nights, gear restrictions, time and area closures and vessel length restrictions. Harvest strategy triggers points implement decision rules to ensure ongoing sustainability of target stocks within the fishery.

1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.	**Meets** Level 1 Ecological Risk Assessment (SICA) found that byproduct species were found to be at moderate or higher risk to the impacts of commercial fishing operations, however, a higher level risk assessment has not been conducted as risk to species considered low given the low levels of effort in the fishery. Red spot king prawn (*Melicertus longistylus*) is the primary byproduct species. Other byproduct species include slipper lobster (*Scyllarides* spp.), Moreton Bay bugs (*Thenus* spp.), octopus (Octopodidae), cuttlefish (*Sepia* spp.) and squid (Teuthoidea). A sustainability assessment updated in 2013 (Pitcher, 2013) using 2011 data assessed the risks to benthos and bycatch were negligible or minimal but noted if should the fishery recover (to effort at 2005 levels) future management action may be required to ensure sustainability of all bycatch and benthos.
(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct species to an appropriate level)	
1.1.9 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	**Meets** Considered likely to meet objective.
If overfished, go to Objective 2: **If not overfished, go to PRINCIPLE 2:**	
Objective 2 - Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.	
Management responses	
1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery within a specific time period appropriate to the biology of the stock.	**Not applicable** The target species, brown tiger prawn and blue endeavour prawn are not considered overfished.
1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented.	**Not applicable** The target species, brown tiger prawn and blue endeavour prawn are not considered overfished.

PRINCIPLE 2 - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.	
Objective 1 - The fishery is conducted in a manner that does not threaten bycatch species.	
Information requirements	
2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.	**Meets** Logbooks are used by fishers to report catches of target and byproduct species, as well as protected species interactions. However these logbooks do not facilitate reporting of bycatch. Bycatch and other information is collected by onboard scientific observers who typically observe two to three per cent of trips per year (equivalent to 34 days in 2016). Independent surveys of bycatch composition and distribution in the fishery were also carried out in 2004 and 2006 (Turnbull and Rose 2007). An objective of the Torres Strait Prawn Fishery Bycatch Action Plan 2015–2017 is to improve reporting of bycatch and TEP interactions.
Assessments	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	**Meets** Level 1 (SICA) Ecological Risk Assessment conducted and assessed 476 discard species for the fishery (Turnbull et al. 2007). The risk assessment found that discards (bycatch) species were found to be at moderate or higher risk to the impacts of commercial fishing operations, however, a higher level risk assessment has not been conducted as risk to species considered low given the low levels of effort in the fishery. AFMA will consider the need to undertake level 2 Ecological Risk Assessment analyses once effort in the fishery reaches the triggers identified in the Torres Strait Prawn Fishery Harvest Strategy 2011.
Management responses	
2.1.3 Measures are in place to avoid capture and mortality of bycatch species unless it is determined that the level of catch is sustainable (except in relation to endangered, threatened or protected species). Steps must be taken to develop suitable technology if none is available.	**Meets** Observer reports suggest that up to 90% of the total catch is discarded and comprises a vast number of species (top five bycatch species by weight comprised between 1 and 2 percent of the total). Discarded species typically include finfish, cephalopods, crabs, lobsters, scallops, sharks and rays. However, a sustainability assessment updated in 2013 (Pitcher, 2013) suggests that there are no sustainability concerns for bycatch or benthic species at the levels of trawl effort observed in 2011. This is primarily due to the reduced effort in the fishery since 2005 and should the fishery recover and increase effort in the future, it is likely some management action may be required to ensure sustainability of all bycatch and benthos. Trawl exclusion zones were implemented in 2008 around Deliverance Island, Kerr Islet and Turu Cay to protect important nesting areas for green turtles and flatback turtles (Patterson et al. 2016). Turtle Excluder Devices and other Bycatch Reduction Devices (BRDs) are used in the fishery. An objective of the Torres Strait Prawn Fishery Bycatch Action Plan 2015–2017 is to gain a better understanding of the current BRDs used in the fishery and improve the uptake of the most effective BRDs. AFMA plans to trial the Kon's Covered Fisheye (a BRD recently trialled in the Commonwealth-managed Northern Prawn Fishery, Laird et al. 2016) within the next 12 months and review BRD requirements for the Torres Strait Prawn Fishery at that time.
2.1.4 An indicator group of bycatch species is monitored.	**Not applicable** No monitoring of indicator group of bycatch species at this time due to low effort in the fishery.

2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	**Not applicable** No monitoring of indicator group of bycatch species at this time due to low effort in the fishery.
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	**Likely to achieve the objective.**
Objective 2 - The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected species and avoids or minimises impacts on threatened ecological communities.	
Information requirements	
2.2.1 Reliable information is collected on the interaction with endangered, threatened or protected species and threatened ecological communities.	**Meets** Logbooks are used to report interactions with endangered, threatened or protected species. Torres Strait Prawn fishers are required to report any interactions with EPBC Act -listed species to AFMA, who then reports these to the Department and publishes quarterly summaries on its website. No threatened ecological communities have been identified within the fishing area of the fishery.
Assessments	
2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.	**Meets** A Level 1 (SICA) Ecological Risk Assessment was completed in 2007, covering a total of 612 species, 112 of those protected species occurring within the area of the fishery. Protected species were found to be at moderate or higher risk to the impacts of commercial fishing operations. A sustainability assesement for trawl bycatch in the Torres Strait Prawn Fishery was conducted in 2005 and updated in 2013 (based on 2011 Vessel Monitoring System (VMS) data) (Pitcher, 2013). Data for 2011 suggests there were no sustainability concerns for bycatch at the level of trawl effort observed for 2011. The majority of protected species interactions in the fishery are with sea snakes. In 2016, 636 sea snakes were caught in the fishery, of which 341 were released alive, nine were dead, one was injured and the remaining 285 had an unknown life status (Pattinson et al 2017). Other protected species groups which have reported interactions in the fishery are turtles, syngnathids (seahorses and pipefishes), seabirds and sawfish. Turtle mitigation has been largely addressed through mandatory use of Turtle Excluder Devices.
2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.	**Not applicable** No threatened ecological communities within the area of the fishery.
Management responses	
2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.	**Meets** All Torres Strait Prawn Fishery vessels are required to have bycatch reduction devices (BRDs) and turtle excluder devices (TEDs) fitted in their nets. Apart from sea snakes there is a low level of interaction with protected species. The survival rate for interactions with sea snakes is reported as high and most are released alive. TED device requirements are in the process of being updated to ensure TEDs are aligned with best practice international standards. The PZJA agencies continue to monitor BRDs and are open to improving design where possible.

2.2.5 There are measures in place to avoid impact on threatened ecological communities.	**Not applicable** No threatened ecological communities within the area of the fishery.
2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	**Meets** Considered likely to achieve objectives.
Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.	
Information requirements	
2.3.1 Information appropriate for the analysis in 2.3.2 is collated and/or collected covering the fisheries impact on the ecosystem and environment generally.	**Meets** Robust methods of data collection are in place. The last Ecological Risk Assessment was completed in 2007. The most recent sustainability assessment was completed in 2013 based on 2011 VMS data. AFMA will consider conducting a Level 2 Ecological Risk Assessment when harvest strategy triggers are reached.
Assessment	
2.3.2 Information is collected and a risk analysis, appropriate to the scale of the fishery and its potential impacts, is conducted into the susceptibility of each of the following ecosystem components to the fishery. 1. Impacts on ecological communities • Benthic communities • Ecologically related, associated or dependent species • Water column communities 2. Impacts on food chains • Structure • Productivity/flows 3. Impacts on the physical environment • Physical habitat • Water quality	**Meets** Prawn trawling is a relatively non-selective method of fishing. Trawling has the potential to have an effect on the ecosystem, by impacting target, byproduct and bycatch species it catches, in addition to impacting the benthic environment in which it operates. A report documenting the results of fishery independent research surveys was conducted between 2004 and 2006. The fishery independent trawl surveys sampled areas open and closed to trawling and concluded that there were no major differences in the types of bycatch species between trawled areas and closed areas in the Torres Strait Prawn Fishery. However, there was some difference in the relative proportions of different bycatch species between trawled and closed areas (Turnbull & Rose, 2007). A seabed habitat mapping study of the Torres Strait examined the likely extent of past effects of trawling on the benthic environment. It indicated that trawling only had a significant effect on the biomass of a small proportion (21 species) of the 256 species analysed (Pitcher et al., 2007). A sustainability assessment updated in 2013 (Pitcher, 2013) suggests that there are no sustainability concerns for bycatch or benthic species at the levels of trawl effort observed in 2011. For several additional species of interest to the traditional inhabitant sector, limited available information permitted simpler assessments suggesting that risk was low in each case. This is primarily due to the reduced effort in the fishery since 2005 and should the fishery recover and increase effort in the future, it is likely some management action may be required to ensure sustainability of all bycatch and benthos. The last Ecological Risk Assessment was completed in 2007. AFMA have advised a revised risk assessment is anticipated 2018–19 regardless of whether the triggers are reached in 2011 Torres Strait Prawn Fishery Harvest Strategy.
Management responses	
2.3.3 Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1.	**Meets** Reference and trigger points and decision rules for target species and catch effort are in place under the 2011 Torres Strait Prawn Fishery Harvest Strategy. The Harvest Strategy states that AFMA are to consider conducting a Level 2 Ecological Risk Assessment when harvest strategy triggers reached. AFMA have advised a revised Ecological Risk Assessment is anticipated 2018–19 regardless of whether the triggers are reached in 2011 Torres Strait Prawn Fishery Harvest Strategy.

2.3.4 There are decision rules that trigger further management responses when monitoring detects impacts on selected ecosystem indicators beyond a predetermined level, or where action is indicated by application of the precautionary approach.	**Meets** Although there is no monitoring of ecosystem indicators or decision rules to manage impacts, the ecological risk assessment (AFMA 2006) and sustainability assessment (Pitcher 2013) considered the risks posed by current fishing levels were likely to be relatively low. The ecological risk assessments for this fishery will be reviewed if the triggers in the harvest strategy (which are based on commercial harvest levels) are reached. AFMA has also committed to do a more fulsome review during 2018–2019 which will include consideration of habitats and communities. These measures are considered sufficient for the current scale of the fishery.
2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	**Meets** Precautionary measures are considered to be in place to prevent any serious or irreversible environmental damage being caused by this fishery.

SECTION 3: ASSESSMENT OF THE TORRES STRAIT PRAWN FISHERY AGAINST THE REQUIREMENTS OF PARTS 12, 13 (13A) AND 16 OF THE EPBC ACT

The table below is not a complete or exact representation of the EPBC Act. It is intended as a checklist of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Part 13 and Part 13A.

Part 12

Section 176 Bioregional Plans	**Comment**
(5) Minister must have regard to relevant bioregional plans	**Not applicable** There is no marine bioregional plan for the Torres Strait.

Part 13

Accreditable plan, regime or policy (Divisions 1, 2, 3 and 4)	**Comment**
s. 208A (1)(a-e), s.222A (1)(a-e), s.245A (1)(a-e), s.265 (1) (a-e) Does the fishery have an accreditable plan of management, regime or policy?	**Yes** There is an accreditable management regime.
Division 1 Listed threatened species, Section 208A Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing?	**Yes** The Torres Strait Prawn Fishery will be managed under the Torres Strait Prawn Fishery Management Plan 2009, in force under the *Torres Strait Fisheries Act 1984*. The Torres Strait Prawn Fishery Management Plan 2009 was accredited under section 208A of the EPBC Act in February 2009. The department acknowledges that the licence conditions of the management plan require fishers to take all reasonable steps to ensure that listed threatened species are not killed or injured as a result of the fishing.
(g) And, is the fishery likely to adversely affect the survival or recovery in nature of the species.	**No** Given the mandatory requirement for all trawl nets to be fitted with a turtle excluder device (TED) and a bycatch reduction device (BRD), the risk of killing or injuring large numbers of listed threatened species, such as marine turtles, is reduced. The fishery is unlikely to adversely affect the survival or recovery in nature of any listed threatened species.
Division 2 Migratory species, Section 222A Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing?	**Yes** The Torres Strait Prawn Fishery Management Plan was last accredited in 2009. Since this time, management arrangements relating to mitigating the impact of fishing on listed migratory species have not significantly changed and continue to require fishers to take all reasonable steps to ensure that members of listed migratory are not killed or injured as a result of fishing.

(g) And, is the fishery likely to adversely affect the conservation status of a listed migratory species or a population of that species?	**No** Given the mandatory requirement for all trawl nets, except try nets, to be fitted with a TED and a BRD, the risk of killing or injuring large numbers of listed migratory species, such as marine turtles, is reduced. Only low levels of interactions with listed migratory species (such as marine turtles) have been reported, and individuals are usually released alive and uninjured. The fishery is unlikely to adversely affect the conservation status of any listed migratory species or a population of that species.
Division 3 Whales and other cetaceans, Section 245 Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing?	**Yes** The Torres Strait Prawn Fishery Management Plan was last accredited in 2009. Since this time, management arrangements relating to mitigating the impact of fishing on cetaceans have not significantly changed and continue to require fishers to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of fishing.
(g) And is the fishery likely to adversely affect the conservation status of a species of cetacean or a population of that species?	**No** No interactions with cetaceans have been reported in the fishery. Given the nature of the harvesting operation (slow moving tows of otter trawl nets), the risk of interactions with cetaceans is likely to be low. Therefore, the fishery is not likely to adversely affect the conservation status of any whale or cetacean species or a population of that species.
Division 4 Listed marine species, Section 265 Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing?	**Yes** The Torres Strait Prawn Fishery Management Plan was last accredited in 2009. Since this time, management arrangements relating to mitigating the impact of fishing on listed marine species have not significantly changed and continue to require fishers to take all reasonable steps to ensure that marine listed species are not killed or injured as a result of fishing.
(g) And is the fishery likely to adversely affect the conservation status of a listed marine species or a population of that species?	**No** The Torres Strait Prawn Fishery has reported interactions with syngnathids (seahorses) and sea snakes, which are both listed marine species under the EPBC Act. Given the mandatory requirement for all trawl nets, except try nets, to be fitted with a Bycatch Reduction Device, the Protected Zone Joint Authority is acting to mitigate the risk of killing or injuring large numbers of listed marine species. Therefore, the department considers that the current operation of the fishery under the management plan is not likely to adversely affect the conservation status of any listed marine species or a population of that species.
Section 303AA Conditions relating to accreditation of plans, regimes and policies	
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	Accreditation under sections 208A, 222A, 245 and 265 is **recommended**.

(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only: (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	**No conditions required**
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	**Not applicable**

Part 13A

Section 303BA Objects of Part 13A	
(1) The objects of this Part are as follows: (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention; (b) to protect wildlife that may be adversely affected by trade; (c) to promote the conservation of biodiversity in Australia and other countries; (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way; (e) to promote the humane treatment of wildlife; (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.	
Section 303DC Minister may amend list (non CITES species)	**Comment**
(1) The Minister may, by legislative instrument, amend the list referred to in section 303DB [list of exempt native specimens] by: (a) doing any of the following: (i) including items in the list; (ii) deleting items from the list; (iii) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; (iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or (b) correcting an inaccuracy or updating the name of a species.	The Department **recommends** that specimens derived from species harvested in the Torres Strait Prawn Fishery, other than specimens that belong to species listed under Part 13 of the EPBC Act, be included in the list of exempt native specimens until 9 October 2026.

(1A) In deciding to amend LENS, Minister must rely primarily on outcomes of Part 10, Div 1 or 2 assessment	The Torres Strait Prawn Fishery was assessed under Part 10 of the EPBC Act in November 2005. As a result of that assessment, the Department considered that actions taken under the management regime for the fishery would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area. In late 2005, the Protected Zone Joint Authority agreed on a proposal to develop a management plan for the fishery. The Torres Strait Prawn Fishery Management Plan 2009 formalised a number of new management arrangements, such as unitising effort, gear restrictions, the compulsory use of TEDs and BRDs, as well as the compulsory use of a Vessel Monitoring System (VMS). In February 2009, the Department considered the impacts of actions on the environment of fishing operations approved in accordance with the management plan under section 146 (Part 10 of the EPBC Act). The Department concluded that actions approved in accordance with the Torres Strait Prawn Fishery Management Plan 2009 would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area. The Department recommends that the LENS be amended under section 303DC(1)(a) to include product derived from the Torres Strait Prawn Fishery until 9 October 2026.
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	**Meets** Fishery consistent with Objects of 13A – see assessment above
(3) Before amending LENS, Minister must consult: (a) other Minister or Ministers as appropriate; and (b) other Minister or Ministers of each State and self-governing Territory as appropriate; and (c) other persons and organisations as appropriate.	**Meets** The Department considers that the consultation requirements have been met. On 10 August 2004, the then Minister for the Environment and Heritage wrote to all fisheries ministers seeking their views on inclusion of product derived from commercial fisheries in the list of exempt native specimens, while subject to declaration as approved wildlife trade operations. Responses in support of the proposal were received from all state and territory fisheries ministers and the Commonwealth minister. The application from AFMA/ Protected Zone Joint Authority was released for public comment from 26 April 2017 to 31 May 2017. The public comment notice sought comment on: ▪ the proposal to amend the list of exempt native specimens to include product derived from the Torres Strait Prawn Fishery, and ▪ the AFMA/ Protected Zone Joint Authority application for the Torres Strait Prawn Fishery. No comments were received.

Part 16

Section 391 Minister must consider precautionary principle in making decisions	**Comment**
(1) Minister must take account of precautionary principle. (2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.	**Meets** The precautionary principle has been considered in preparing the Department's advice about decisions under section 303DC. Given the controlled effort in the fishery, the annual monitoring of stocks against historic catch and effort, and the measures implemented to mitigate the risk of interactions with protected species, precautionary measures are considered to be in place to prevent serious or irreversible environmental damage being caused by this fishery.

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